

"AN UPDATE OF U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES"

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**Reference: NBSIR 88-3698 "A Review of
U.S. Participation in International
Standards Activities," January 1988**

**U.S. DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary
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An Update of U.S. Participation in International Standards Activities

Abstract

This report presents updated information on the current level of U.S. participation in the two major international standardization bodies; ISO and IEC. Data on the new ISO/IEC Joint Technical Committee 1 (JTC 1) on Information Technology are also presented.

1. Introduction

1.1 Background

In early 1988, the Office of the Associate Director for Industry and Standards issued a report¹ as part of its responsibility for monitoring the adequacy of representation of U.S. interests in international standards activities.² That report described the role of international standards and their increasingly significant importance in world trade. It reviewed the levels of U.S. participation in the two major international standardization bodies - the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) - over the 20-year period 1966 - 1986. A coarse analysis of the data indicated some direct correlation between U.S. participation in international standards activities and U.S. exports for several product sectors, primarily those designated as high technology trade categories. This relationship seems to stem in part, from the general increase observed in world trade, plus the increasing multi-national and international aspects of U.S.-based corporations in particular. U.S. participation levels in the electrical and electronic fields, represented in IEC technical committees, have been greater than those in the non-electrotechnical disciplines covered by ISO.

This report lists changes that have occurred from 1986 through June 1989. Information was obtained from committee rosters published by the ISO and IEC and information provided by the

¹ Cooke, Patrick W., "A Review of U.S. Participation in International Standardization Activities," NBSIR 88-3698; January 1988.

² NIST responsibilities detailed under Section 413, Title IV (on standards) of the U.S. Trade Agreements Act of 1979.

American National Standards Institute (ANSI)³, the U.S. member of ISO. The United States National Committee of the International Electrotechnical Commission (USNC/IEC) is the U.S. member of IEC. Technically, the USNC is an independent organization; however, it is attached to ANSI through its Electrical and Electronics Standards Board.

Technical standards development activities represent a major component of the European Community's plan to integrate its economy by the end of 1992, with an EC policy to use international standards, if available, to implement its directives relating to health, safety and the environment. Furthermore, recent Congressional inquiries into the status of the United States' participation in international standards activities makes it appropriate to update information on the level of U.S. participation in ISO and IEC at this time.

1.2 Format

Section 2 provides current information on U.S. participation in ISO activities through technical committee (TC) secretariats and comparisons with similar levels in the earlier period. Information on IEC activities are summarized in Section 3. Section 4 highlights summary data on technical committee meetings and U.S. delegations to ISO and IEC Technical Committee meetings. Information on the make-up of the newly-established ISO/IEC Joint Technical Committee 1 on Information Technology is provided in Section 5. Section 6 lists the appendices, which provide specific information on technical committee secretariats held by member bodies for all ISO and IEC committees. Section 7 summarizes some conclusions resulting from this update.

2. ISO Updated Information - 1989

2.1 U.S.-Held ISO TC Secretariats (1989)

In 1989 the U.S. held 17 secretariats of the 166 ISO Technical Committees (10.2%), namely:

- TC 11, Boilers and Pressure Vessels (since 1966)
- TC 20, Aircraft and Space Vehicles
- TC 28, Petroleum Products and Lubricants (since 1966)
- TC 31, Tires, Rims and Valves
- TC 36, Cinematography (since 1966)
- TC 42, Photography (since 1966)
- TC 61, Plastics (since 1966)

³ American National Standards Institute, 1430 Broadway, New York, NY 10018.

TC 67, Materials and Equipment for Petroleum and Natural Gas Industries
 TC 68, Banking and Related Financial Services⁴
 TC 104, Freight Containers (since 1966)
 TC 108, Mechanical Vibration and Shock (since 1966)
 TC 127, Earthmoving Machinery
 TC 131, Fluid Power Systems
 TC 153, Valves
 TC 161, Control and Safety Devices for Non-Industrial Gas-Fired Appliances and Systems
 TC 189, Ceramic Tile (since 1986)
 TC 192, Gas Turbines (since 1988)

A new ISO-IEC Joint Technical Committee 1 (JTC 1) on Information Technology was established in 1987, with the United States holding the secretariat. The following ISO and IEC Technical Committees were integrated to form the new ISO/IEC JTC 1:

ISO TC 97, Information Processing Systems
 IEC TC 83, Information Technology Equipment
 IEC SC 47B, Microprocessor Systems

The U.S. previously held the secretariat of ISO TC 97.

The data in this section on ISO participation have been adjusted to reflect the exclusion of JTC 1. Summary data on JTC 1 are given in section 5 of this report.

2.2 U.S. Gains in ISO TC Secretariats (1986-1989)

The U.S. gained two secretariats:

TC 67, Materials and Equipment for Petroleum and Natural Gas Industries - previously held by Romania (IRS).

TC 192, Gas Turbines - a new technical committee established in 1988 from the previous TC 70, SC 6 - "Gas Turbines" of which ANSI held the SC secretariat.

2.3 U.S. Losses in ISO TC Secretariats (1986-1989)

None.

2.4 Comparison (1989 vis-à-vis 1986)

In 1986 the U.S. held 16 secretariats of the then 164 ISO Technical Committees (9.8%), compared to 17 secretariats of 166 ISO Technical Committees in 1989 (10.2%).

⁴ Committee title modified in 1988 to include financial services.

The following table summarizes the leadership positions in ISO Technical Committees (TC), Subcommittees (SC), and Working Groups (WG) held by the United States in 1986 and in 1989.

Secretariats of ISO Technical Committees, Subcommittees
and Conveners of Working Groups, 1986-1989

	1986			1989 ⁵			1986-1989
	ISO Total	U.S. Total	% U.S. Held	ISO Total	U.S. Total	% U.S. Held	% Gain/Loss for U.S.
TC	164	16	9.8%	166	17	10.2%	+0.4%
SC	645	69	10.7	619	64	10.3	-0.4
WG	1556	212	13.6	1588	210	13.2	-0.4
Total	2365	297	12.6%	2373	291	12.2%	-0.4%

2.5 Level of U.S. Participation Status In ISO Technical
Committees - 1986 & 1989

Status In Technical Committee	1986		1989		% change '86-'89
	No.	%	No.	%	
"P" - Participant	113	68.9%	112	67.1%	-1.8%
"O" - Observer	48	29.3	51	30.5	+1.2
NR-Not Represented	3	1.8	4	2.4	+0.6
Total	164		167		

⁵ 1989 data does not include ISO/IEC JTC 1 which was formed in 1987. See Section 5.

There was a net decrease (1.8%) for the U.S. in overall active participation levels from 1986-1989. "Observer" status increased as did the number of technical committees on which the U.S. had no representation.

NOTE: Data for the above tables were derived from official ISO Participation tables. There are nine ISO Technical Committees which are essentially dormant - with no new work activity underway - only a review function of ISO standards already published. These committees are:

TC 18, Zinc and Zinc Alloys
TC 19, Preferred Numbers (Note: This TC may become more active in near future)
TC 50, Lac
TC 56, Mica
TC 109, Oil Burners and Associated Equipment
TC 128, Glass Plant, Pipeline and Fittings
TC 142, Cleaning Equipment for Air and Other Gases
TC 144, Air Quality
TC 152, Gypsum, Gypsum Plasters and Gypsum Products

2.6 Changes in U.S. Participation Status in ISO, 1986-1989

(a) from "Participant" to "Observer" status:

TC 34, Agricultural Food Products
TC 111, Round Steel Link Chains, Lifting Hooks and Accessories
TC 123, Plain Bearings
TC 148, Sewing Machines
TC 181, Safety of Toys

(b) from "Observer" to "Participant" status:

TC 14, Shafts for Machinery and Accessories
TC 179, Masonry
TC 37, Terminology (principles and coordination) (see also (d) below)

(c) from "Not Represented" to "Participant" status:

TC 126, Tobacco and Tobacco Products

(d) ANSI anticipated changes from "Observer" to "Participant" status:

TC 55, Sawn Timber and Sawlogs
TC 59, Building Construction
TC 149, Cycles

2.7 U.S. Participation Status on Newly Formed ISO Technical

Committees (since 1986)

TC 192, Gas Turbines - "Participant" (also secretariat)
TC 193, Natural Gas - "Observer"
TC 194, Biological Testing of Medical and Dental materials and Devices - "Not Represented" (Note: A change to "Participant" status for both TC 193 and TC 194 has been initiated by ANSI.)

3. IEC Updated Information - 1989

3.1 U.S. - Held IEC TC and SC Secretariats (1989)

In 1989 the U.S. held 32 TC and SC secretariats (13 TC and 19 SC) of the 197 IEC Technical Committees and Subcommittees (16.2%) as follows:

SC2J: Classification of Insulation Systems for Rotating Machinery (since 1981)
TC4: Hydraulic Turbines (since 1966)
TC5: Steam Turbines (since 1974)
SC12F: Equipment Used in the Mobile Services (since 1972)
SC15B: Endurance Tests (since 1966)
SC15C: Specifications (since 1975)
SC22G: Semiconductor Power Converters for Adjustable Speed Electric Drive Systems (since 1982)
TC25: Quantities and Units, and Their Letter Symbols (since 1966)
SC31A: Flameproof Enclosures (since 1984)
SC31H: Apparatus for Use in the Presence of Ignitable Dust (since 1966)
TC37: Surge Arresters (since 1966)
TC46: Cables, Wires and Waveguides for Telecommunications Equipment (since 1971)
SC46B: Waveguides and Their Accessories (since 1966)
SC46D: Connectors for R.F. Cables (since 1982)
TC48: Electromechanical Components for Electronic Equipment (since 1968)
SC48B: Connectors (since 1968)
SC48C: Switches (since 1984)
TC52: Printed Circuits (since 1985)
SC59A: Electric Dishwashers (since 1966)
SC59H: Microwave Appliances (since 1972)
TC61: Safety of Household and Similar Electrical Appliances (since 1967)
SC61B: Safety of Household Microwave Ovens (since 1970)
SC61D: Appliances for Air-conditioning for Household and Similar Purposes (since 1973)
SC62D: Electromedical Equipment (since 1970)
SC65B: Elements of Systems (since 1973)
SC66D: Analyzing Equipment (since 1975)

TC72: Automatic Controls for Household Use (since 1971)
 TC74: Safety of Data Processing Equipment and Office Machines (since 1973)
 TC76: Laser Equipment (since 1973)
 TC82: Solar Photovoltaic Energy Systems (since 1982)
 TC86: Fibre Optics (since 1985)
 CISPR/SCA:⁶ Radio Interference Measurements and Statistical Methods (since 1975)

3.2 U.S. Gains in IEC Secretariats (1986-1989)

None

3.3 U.S. Losses in IEC Secretariats (1986-1989)

IEC/SC 61 G on "Safety of Projectors" was formally disbanded by IEC in 1988. The U.S. had held the secretariat of this Subcommittee since 1983.

3.4 Comparison

The following table summarizes the leadership positions in IEC Technical Committees (TC) and Subcommittees (SC) held by the United States in 1986 and in 1989. Total IEC TC and SC's decreased from 200 to 197 over the 3-year period.

Secretariats of IEC Technical Committees and Subcommittees, 1986 - 1989

	1986			1989			1986-1989 % Gain Loss
	IEC Total	US Total	% US Held	IEC Total	US Total	% US Held	
TC	83	13	15.7%	83	13	15.7%	-
SC	117	20	17.1%	114	19	16.7%	-0.4%
Total	200	33	16.5%	197	32	16.2%	-0.3%

⁶ CISPR is the IEC sponsored "International Special Committee on Radio Interference." Sub-Committee A covers "CISPR Radio interference measurements and statistical methods." There are six other CISPR subcommittees covering different forms of radio interference suppression.

3.5 Newly Established IEC Committees

Three new IEC Technical Committees were established during the period. The new IEC Committees and the country holding the secretariat position are as follows:

TC87: Ultrasonics (Secretariat: USSR)
TC88: Safety of windturbine generator systems (Secretariat: Netherlands)
TC89: Fire hazard testing (provisional title) (Secretariat: Federal Republic of Germany)

4. Levels of Involvement - ANSI Delegations to ISO and IEC Meetings

4.1 ISO Standards Committee Meetings - CY 1966-1988

The following information is based on estimates provided by ANSI and applies to ISO and IEC meetings at the technical committee and subcommittee levels.

	<u>CY'86</u>	<u>CY'88</u>	<u>Differences</u> <u>86-88</u>
No. of U.S. Delegates	466	753	+287
No. of ISO Meetings Held	132	140	+ 8
No. of U.S. Hosted Meetings	7	15	+ 8
U.S. Delegates/ISO Meeting	3.5	5.4	+1.9

4.2 IEC Standards Committee Meetings - CY1966 and 1988

	<u>CY'86</u>	<u>CY'88</u>	<u>Differences</u> <u>86-88</u>
No. of U.S. Delegates	143	175	+32
No. of IEC Meetings Held	45	56	+13
No. of U.S. Hosted Meetings	4	4	0
U.S. Delegates/IEC Meeting	3.2	3.1	-0.1

5. Information on ISO/IEC Joint Technical Committee 1 on Information Technology

As indicated earlier, ISO/IEC JTC 1 was established in 1987, the first Joint Committee ever convened by ISO and IEC acting together. The United States administers the international secretariat of JTC 1 and holds 4 of the 16 Subcommittee

Secretariats and 20 of the 71 Working Group Secretariats in JTC 1. The overall distribution of secretariats among member bodies is given in the following table.

ISO/IEC Joint Technical Committee 1
Distribution of Technical Secretariats

SECRETARIATS Member body		SC	WG	Total
AFNOR	France	2	7	9
ANSI	USA	4	20	24
BSI	United Kingdom	1	11	12
DIN	Germany, F.R.	3	5	8
JISC	Japan	2	2	4
NNI	Netherlands	1	1	2
SCC	Canada	2	10	12
SIS	Sweden	1	2	3
SNV	Switzerland	0	4	4
Sub-committees and working groups which have no secretariat			9	9
Total		16	71	87

The organizational structure, functional area of responsibility, title, and country holding the Secretariat of each JTC 1 Subcommittee are shown in Figure 1.

6. Distribution of ISO and IEC Technical Committee Secretariats

The following appendices cover the ISO and IEC Technical Committees and identify the country holding each secretariat.

Appendix A - ISO Secretariats

Appendix B - Distribution of ISO Technical Committee Secretariats by Country

Appendix C - IEC Secretariats

Appendix D - Distribution by Country for Secretariats of IEC Technical Committees and Sub-Committees

7. Summary

The United States has a dominant position in the new ISO/IEC Joint Technical Committee 1 on "Information Technology," with 29% of the 91 committee secretariats available including the international secretariat of the overall joint committee and five of its major subcommittees. Secretariats held by the United States in the ISO remained at approximately 12%, and in IEC at about 16%, about the same levels as in the 1986 review. In contrast, the Western European countries (i.e., those making up the EC⁷ and EFTA⁸ countries) together hold 67% of the ISO secretariats and 69% of the IEC secretariats.

⁷ The Member States of the European Community include Belgium, Denmark, France, Germany (F.R.), Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.

⁸ The Member States of the European Free Trade Association (EFTA) include Austria, Finland, Iceland, Norway, Sweden and Switzerland.

ORGANIZATION CHART FOR ISO/IEC JOINT TECHNICAL COMMITTEE 1 (JTC1) INFORMATION TECHNOLOGY

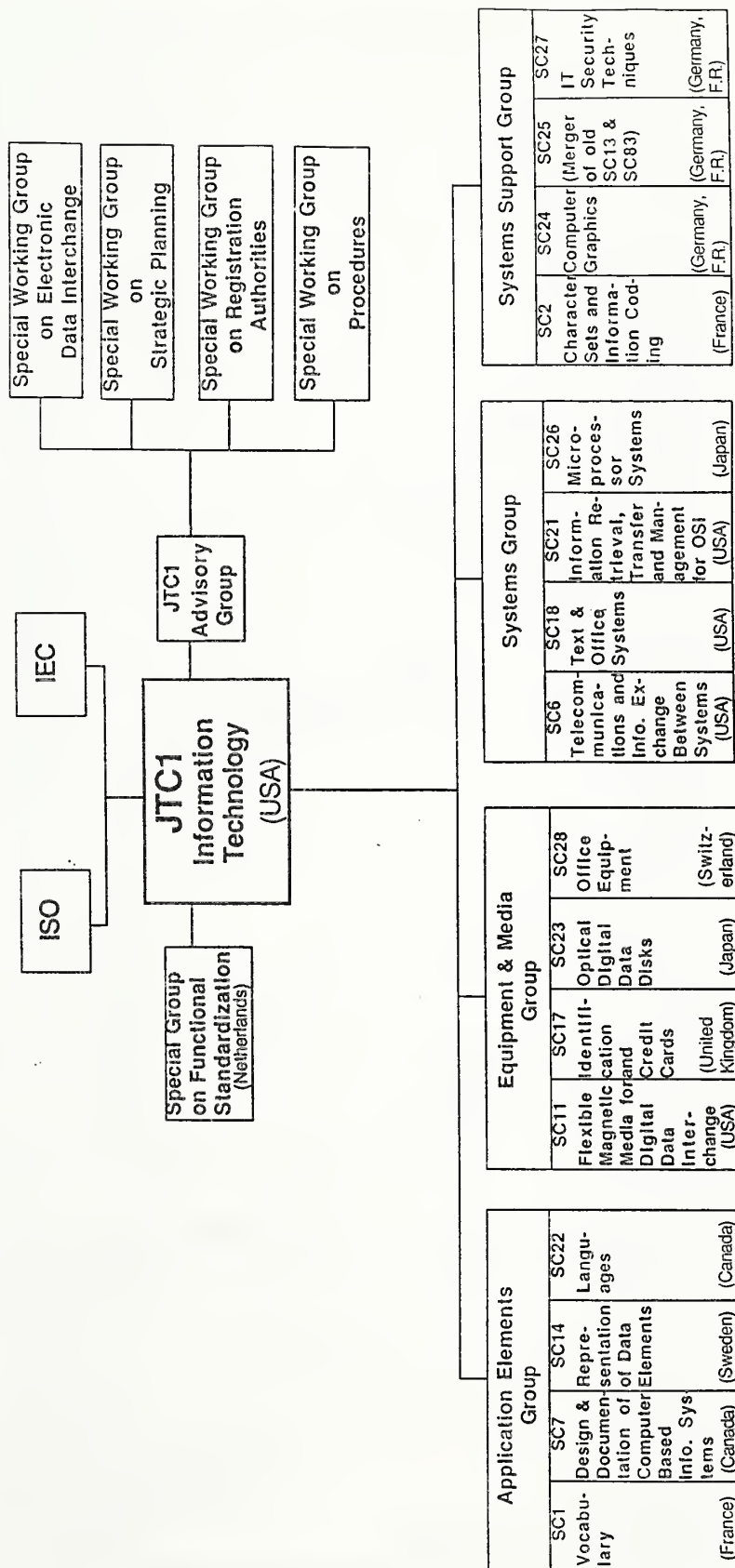


Figure 1.

ISO SECRETARIATS

APPENDIX A

ISO NO.	TECHNICAL COMMITTEES TITLE	COUNTRY HOLDING SECRETARIAT
1	Screw threads	SWEDEN
2	Fasteners	GERMANY, F.R.
3	Limits and fits	GERMANY, F.R.
4	Rolling bearings	SWEDEN
5	Ferrous metal pipes and metallic fittings	SWITZERLAND
6	Paper, board and pulps	CANADA
8	Shipbuilding and marine structures	NETHERLANDS
10	Technical drawings	GERMANY, F.R.
11	Boilers and pressure vessels	UNITED STATES
12	Quantities, units, symbols, conversion factors and conversion tables	SWEDEN
14	Shafts for machinery and accessories	BELGIUM
17	Steel	JAPAN
18	Zinc and zinc alloys	dormant
19	Preferred numbers	dormant
20	Aircraft and space vehicles	UNITED STATES
21	Equipment for fire protection and fire fighting	UNITED KINGDOM
22	Road vehicles	FRANCE
23	Tractors and machinery for agriculture and forestry	FRANCE
24	Sieves, sieving and other sizing methods	GERMANY, F.R.
25	Cast iron and pig iron	UNITED KINGDOM
26	Copper and copper alloys	GERMANY, F.R.
27	Solid mineral fuels	UNITED KINGDOM
28	Petroleum products and lubricants	UNITED STATES
29	Small tools	FRANCE
30	Measurement of fluid flow in closed conduits	FRANCE
31	Tyres, rims and valves	UNITED STATES
33	Refractories	UNITED KINGDOM
34	Agricultural food products	HUNGARY
35	Paints and varnishes	NETHERLANDS
36	Cinematography	UNITED STATES
37	Terminology (principles and co-ordination)	AUSTRIA
38	Textiles	UNITED KINGDOM
39	Machine tools	ITALY
41	Pulleys and belts (including veebelts)	FRANCE
42	Photography	UNITED STATES
43	Acoustics	DENMARK
44	Welding and allied processes	FRANCE
45	Rubber and rubber products	UNITED KINGDOM
46	Information and documentation	GERMANY, F.R.
47	Chemistry	NETHERLANDS
48	Laboratory glassware and related apparatus	USSR
50	Lac	dormant
51	Pallets for unit load method of materials handling	UNITED KINGDOM
52	Light gauge metal containers	FRANCE
54	Essential oils	PORTUGAL
55	Sawn timber and sawlogs	USSR
56	Mica	dormant
57	Metrology and properties of surfaces	USSR
58	Gas cylinders	SWEDEN
59	Building construction	vacant
60	Gears	BELGIUM
61	Plastics	UNITED STATES
63	Glass containers	CZECHOSLOVAKIA
65	Manganese and chromium ores	USSR

ISO NO.	TECHNICAL COMMITTEES TITLE	COUNTRY HOLDING SECRETARIAT
67	Materials and equipment for petroleum and natural gas industries	UNITED STATES
68	Banking and related financial services	UNITED STATES
69	Application of statistical methods	FRANCE
70	Internal combustion engines	UNITED KINGDOM
71	Concrete, reinforced concrete and pre-stressed concrete	AUSTRIA
72	Textile machinery and allied machinery and accessories	SWITZERLAND
74	Cement and lime	BELGIUM
76	Transfusion, infusion and injection equipment for medical use	GERMANY, F.R.
77	Products in fibre reinforced cement	SWITZERLAND
79	Light metals and their alloys	FRANCE
81	Common names for pesticides and other agrochemicals	UNITED KINGDOM
82	Mining	GERMANY, F.R.
83	Sports and recreational equipment	GERMANY, F.R.
84	Syringes for medical use and needles for injections	FRANCE
85	Nuclear energy	GERMANY, F.R.
86	Refrigeration	USSR
87	Cork	PORTUGAL
89	Wood-based panels	GERMANY, F.R.
91	Surface active agents	FRANCE
92	Fire tests on building materials, components and structures	UNITED KINGDOM
93	Starch (including derivatives and by-products)	FRANCE
94	Personal safety — Protective clothing and equipment	UNITED KINGDOM
96	Cranes, lifting appliances and related equipment	AUSTRALIA
98	Bases for design of structures	POLAND
99	Semi-manufactures of timber	USSR
100	Chains and chain wheels for power transmission and conveyor	UNITED KINGDOM
101	Continuous mechanical handling equipment	FRANCE
102	Iron ores	JAPAN
104	Freight containers	UNITED STATES
105	Steel wire ropes	UNITED KINGDOM
106	Dentistry	UNITED KINGDOM
107	Metallic and other inorganic coatings	ITALY
108	Mechanical vibration and shock	UNITED STATES
109	Oil burners and associated equipment	dormant
110	Industrial trucks	GERMANY, F.R.
111	Round steel link chains, lifting hooks and accessories	UNITED KINGDOM
112	Vacuum technology	USSR
113	Measurement of liquid flow in open channels	INDIA
114	Horology	SWITZERLAND
115	Pumps	FRANCE
116	Space heating appliances	UNITED KINGDOM
117	Industrial fans	FRANCE
118	Compressors, pneumatic tools and pneumatic machines	SWEDEN
119	Powder metallurgy	SWEDEN
120	Leather	INDIA
121	Anaesthetic and respiratory equipment	UNITED KINGDOM
122	Packaging	— vacant —
123	Plain bearings	USSR
125	Enclosures and conditions for testing	AUSTRALIA
126	Tobacco and tobacco products	GERMANY, F.R.
127	Earth-moving machinery	UNITED STATES
128	Glass plant, pipeline and fittings	dormant
129	Aluminium ores	FRANCE
130	Graphic technology	GERMANY, F.R.
131	Fluid power systems	UNITED STATES
132	Ferroalloys	USSR

ISO NO.	TECHNICAL COMMITTEES TITLE	COUNTRY HOLDING SECRETARIAT
133	Sizing systems and designations for clothes	SOUTH AFRICA
134	Fertilizers and soil conditioners	FRANCE
135	Non-destructive testing	USSR
136	Furniture	SWEDEN
137	Sizing system, designations and marking for boots and shoes	SOUTH AFRICA
138	Plastics pipes, fittings and valves for the transport of fluids	NETHERLANDS
142	Cleaning equipment for air and other gases	dormant
144	Air distribution and air diffusion	dormant
145	Graphical symbols	GERMANY, F.R.
146	Air quality	GERMANY, F.R.
147	Water quality	GERMANY, F.R.
148	Sewing machines	GERMANY, F.R.
149	Cycles	INDIA
150	Implants for surgery	GERMANY, F.R.
152	Gypsum, gypsum plasters and gypsum products	dormant
153	Valves	UNITED STATES
154	Documents and data elements in administration, commerce and industry	SWEDEN
155	Nickel and nickel alloys	CANADA
156	Corrosion of metals and alloys	USSR
157	Mechanical contraceptives	SWEDEN
158	Analysis of gases	FRANCE
159	Ergonomics	GERMANY, F.R.
160	Glass in building	UNITED KINGDOM
161	Control and safety devices for non-industrial gas-fired appliances and systems	UNITED STATES
162	Doors and windows	NORWAY
163	Thermal insulation	SWEDEN
164	Mechanical testing of metals	JAPAN
165	Timber structures	DENMARK
166	Ceramic ware, glassware and glass ceramic ware in contact with food	ISRAEL
167	Steel and aluminium structures	NORWAY
168	Prosthetics and orthotics	GERMANY, F.R.
170	Surgical instruments	GERMANY, F.R.
171	Micrographics and optical memories for document and image recording, storage and use	FRANCE
172	Optics and optical instruments	GERMANY, F.R.
173	Technical systems and aids for disabled or handicapped persons	SWEDEN
174	Jewellery	GERMANY, F.R.
175	Fluorspar	SOUTH AFRICA
176	Quality management and quality assurance	CANADA
177	Caravans	UNITED KINGDOM
178	Lifts, escalators, passenger conveyors	FRANCE
179	Masonry	GERMANY, F.R.
180	Solar energy	AUSTRALIA
181	Safety of toys	DENMARK
182	Geotechnics	NETHERLANDS
183	Copper, lead and zinc ores and concentrates	AUSTRALIA
184	Industrial automation systems	FRANCE
185	Safety devices for protection against excessive pressure	UNITED KINGDOM
186	Cutlery and table and decorative metal hollow-ware	UNITED KINGDOM
187	Colour notations	SWEDEN
188	Small craft	SWEDEN
189	Ceramic tile	UNITED STATES
190	Soil quality	NETHERLANDS
191	Humane animal (mammal) traps	CANADA
192	Gas turbines	UNITED STATES
193	Natural gas	NETHERLANDS
194	Biological testing of medical and dental materials and	GERMANY, F.R.

APPENDIX B

Distribution of ISO Technical Committee Secretariats by Country

ISO Technical Committees

SECRETARIATS Member body		<u>TC</u>	<u>SC</u>	<u>WG</u>	<u>Total</u>
ABNT	Brazil		2	2	4
AENOR	Spain		3	6	9
AFNOR	France	24	101	226	351
ANSI	USA	17	64	210	291
BDS	Bulgaria		1		1
BIS	India	5	16	4	25
BSI	United Kingdom	23	88	289	400
CSBTS	China		2	1	3
CSN	Czechoslovakia	1	3	6	10
DIN	Germany, F.R.	27	113	297	437
DS	Denmark	3	4	28	35
GOST	USSR	11	33	12	56
IBN	Belgium	4	8	20	32
ICONTEC	Colombia			1	1
IPQ	Portugal	2		5	7
JISC	Japan	3	10	27	40
MSZH	Hungary	1	1	2	4
NNI	Netherlands	7	15	52	74
NSF	Norway	2	9	10	21
ON	Austria	2	4	17	23
PKNMiJ	Poland	1	4	5	10
PNGS	Papua New Guinea			1	1
SAA	Australia	4	3	31	38
SABS	South Africa, Rep. of	3	2	3	8
SANZ	New Zealand		1		1
SCC	Canada	4	24	57	85
SFS	Finland		3	8	11
SII	Israel	1	1	3	5
SIRIM	Malaysia			2	2
SIS	Sweden	13	19	66	98
SNV	Switzerland	4	20	21	45
TBS	Tanzania		1		1
TSE	Turkey		3		3
UNI	Italy	2	21	42	65
Technical committees, sub-committees and working groups which have no secretariat		2	40	134	176
Total		166	619	1588	2373

NOTE: The EC countries hold 68 TC Secretariats and 249 SC secretariats. Source: ISO Memento, 1989

IEC SECRETARIATS

IEC TECHNICAL COMMITTEES AND SUB COMMITTEES		COUNTRY HOLDING SECRETARIAT
NO.	TITLE	
1:	Terminology	FRANCE
2:	Rotating machinery	UNITED KINGDOM
2A:	Turbine-type generators	USSR
2B:	Mounting dimensions and output series	FRANCE
2G:	Test methods and procedures	USSR
2H:	Degrees of protection, methods of cooling and mounting arrangements	FRANCE
2J:	Classification of insulation systems for rotating machinery	UNITED STATES
3:	Documentation and graphical symbols	SWITZERLAND
3A:	Graphical symbols for diagrams	SWITZERLAND
3B:	Documentation	SWEDEN
3C:	Graphical symbols for use on equipment	FRANCE
4:	Hydraulic turbines	UNITED STATES
5:	Steam turbines	UNITED STATES
7:	Bare aluminium conductors	BRAZIL
8:	Standard voltages, current ratings and frequencies	ITALY
9:	Electric traction equipment	FRANCE
10:	Fluids for electrotechnical applications	BELGIUM
11:	Recommendations for overhead lines	FRANCE
12:	Radiocommunications	NETHERLANDS
12A:	Receiving equipment	JAPAN
12B:	Safety	NETHERLANDS
12C:	Transmitting equipment	FRANCE
12D:	Aerials (antennas)	— disbanded —
12E:	Radio relay and fixed satellite communications systems	CZECHOSLOVAKIA
12F:	Equipment used in the mobile services	UNITED STATES
12G:	Cabled distribution systems	CANADA
13:	Equipment for electrical energy measurement and load control	HUNGARY
14:	Power transformers	UNITED KINGDOM
14B:	On-load tap changers	UNITED KINGDOM
14C:	Reactors	GERMANY, F.R.
14D:	Small power transformers and reactors and special transformers and reactors	FRANCE
15:	Insulating materials	ITALY
15A:	Short-time tests	GERMANY, F.R.
15B:	Endurance tests	UNITED STATES
15C:	Specifications	UNITED STATES
16:	Terminal markings and other identifications	GERMANY, F.R.
17:	Switchgear and controlgear	SWEDEN
17A:	High-voltage switchgear and controlgear	SWEDEN
17B:	Low-voltage switchgear and controlgear	FRANCE
17C:	High-voltage enclosed switchgear and controlgear	GERMANY, F.R.
17D:	Low-voltage switchgear and controlgear assemblies	GERMANY, F.R.
18:	Electrical installations in ships	NETHERLANDS
18A:	Cables and cable installations	ITALY
20:	Electric cables	UNITED KINGDOM
20A:	High-voltage cables	UNITED KINGDOM
20B:	Low-voltage cables	NETHERLANDS
21:	Secondary cells and batteries	CZECHOSLOVAKIA
21A:	Alkaline secondary cells and batteries	GERMANY, F.R.
22:	Power electronics	SWITZERLAND
22B:	Semiconductor convertors	SWEDEN
22D:	Electronic power convertors for rolling stock	FRANCE
22E:	Stabilized power supplies	SWITZERLAND
22F:	Convertors for high-voltage d.c. power transmission	USSR
22G:	Semiconductor power convertors for adjustable speed electric drive systems	UNITED STATES
23:	Electrical accessories	BELGIUM

IEC TECHNICAL COMMITTEES AND SUBCOMMITTEES		COUNTRY HOLDING SECRETARIAT
NO.	TITLE	
23A:	Conduits for electrical purposes	UNITED KINGDOM
23B:	Plugs, socket-outlets and switches	ITALY
23C:	World-wide plug and socket-outlet systems	SOUTH AFRICA
23E:	Circuit-breakers and similar equipment for household use	ITALY
23F:	Connecting devices	FRANCE
23G:	Appliance couplers	SWEDEN
23H:	Industrial plugs and socket-outlets	FRANCE
23J:	Switches for appliances	GERMANY, F.R.
25:	Quantities and units, and their letter symbols	UNITED STATES
26:	Electric welding	GERMANY, F.R.
27:	Industrial electroheating equipment	USSR
28:	Insulation co-ordination	FRANCE
28A:	Insulation co-ordination for low-voltage equipment	GERMANY, F.R.
31:	Electrical apparatus for explosive atmospheres	UNITED KINGDOM
31A:	Flameproof enclosures	UNITED STATES
31B:	Sand-filled apparatus	FRANCE
31C:	Increased safety apparatus	UNITED KINGDOM
31D:	Pressurization and associated techniques	FRANCE
31G:	Intrinsically-safe apparatus	UNITED KINGDOM
31H:	Apparatus for use in the presence of ignitable dust	UNITED STATES
31J:	Classification of hazardous areas and installation requirements	YUGOSLAVIA
32:	Fuses	FRANCE
32A:	High-voltage fuses	FRANCE
32B:	Low-voltage fuses	GERMANY, F.R.
32C:	Miniature fuses	GERMANY, F.R.
33:	Power capacitors	ITALY
34:	Lamps and related equipment	UNITED KINGDOM
34A:	Lamps	UNITED KINGDOM
34B:	Lamp caps and holders	NETHERLANDS
34C:	Auxiliaries for discharge lamps	UNITED KINGDOM
34D:	Luminaires	UNITED KINGDOM
35:	Primary cells and batteries	NETHERLANDS
36:	Insulators	ITALY
36A:	Insulated bushings	ITALY
36B:	Insulators for overhead lines	FRANCE
36C:	Insulators for sub-stations	SWEDEN
37:	Surge arresters	UNITED STATES
38:	Instrument transformers	UNITED KINGDOM
39:	Electronic tubes	NETHERLANDS
40:	Capacitors and resistors for electronic equipment	NETHERLANDS
41:	Electrical relays	FRANCE
41A:	All-or-nothing relays	FRANCE
41B:	Measuring relays and protection equipment	FRANCE
42:	High-voltage testing techniques	CANADA
43:	Electric fans for household and similar purposes	INDIA
44:	Electrical equipment of industrial machines	UNITED KINGDOM
45:	Nuclear instrumentation	USSR
45A:	Reactor instrumentation	FRANCE
45B:	Radiation protection instrumentation	ITALY
46:	Cables, wires and waveguides for telecommunication equipment	UNITED STATES
46A:	R.F. cables	UNITED KINGDOM
46B:	Waveguides and their accessories	UNITED STATES
46C:	L.F. cables and wires	FRANCE
46D:	Connectors for R.F. cables	UNITED STATES
47:	Semiconductor devices	FRANCE
47A:	Integrated circuits	FRANCE
47B:	Microprocessor systems	JAPAN
48:	Electromechanical components for electronic equipment	UNITED STATES
48B:	Connectors	UNITED STATES

IEC TECHNICAL COMMITTEES AND SUBCOMMITTEES	COUNTRY HOLDING SECRETARIAT
NO. TITLE:	
48C: Switches	UNITED STATES
48D: Mechanical structures for electronic equipment	GERMANY, F.R.
49: Piezoelectric devices for frequency control and selection	USSR
50: Environmental testing	UNITED KINGDOM
50A: Shock and vibration tests	UNITED KINGDOM
50B: Climatic tests	NETHERLANDS
50D: Fire hazard testing	GERMANY
51: Magnetic components and ferrite materials	UNITED KINGDOM
52: Printed circuits	UNITED STATES
55: Winding wires	FRANCE
56: Reliability and maintainability	SWEDEN
57: Telecontrol, teleprotection and associated telecommunications for electric power systems	GERMANY, F.R.
58: Methods of measurement of electrical properties of metallic materials	to be appointed
59: Performance of household electrical appliances	FRANCE
59A: Electric dishwashers	UNITED STATES
59B: Cooking appliances	to be appointed
59C: Heating appliances	FRANCE
59D: Home laundry appliances	FRANCE
59E: Ironing and pressing appliances	JAPAN
59F: Floor treatment appliances	SWEDEN
59G: Small kitchen machines	ITALY
59H: Microwave appliances	UNITED STATES
59J: Hand-held electric tools	FRANCE
60: Recording	NETHERLANDS
60A: Sound recording	BELGIUM
60B: Video recording	GERMANY, F.R.
61: Safety of household and similar electrical appliances	UNITED STATES
61B: Safety of household microwave ovens	UNITED STATES
61C: Household appliances for refrigeration	FRANCE
61D: Appliances for air-conditioning for household and similar purposes	UNITED STATES
61E: Safety of electrical commercial catering equipment	SOUTH AFRICA
61F: Safety of hand-held motor-operated tools	ITALY
61G: Safety of projectors	— disbanded —
61H: Safety of electrically-operated farm appliances	NEW ZEALAND
61J: Electrical motor-operated cleaning appliances for industrial use	GERMANY, F.R.
62: Electrical equipment in medical practice	GERMANY, F.R.
62A: Common aspects of electrical equipment used in medical practice	FRANCE
62B: X-ray equipment operating up to 400 kV and accessories	GERMANY, F.R.
62C: High-energy radiation equipment and equipment for nuclear medicine	SWITZERLAND
62D: Electromedical equipment	UNITED STATES
63: Insulation systems	USSR
64: Electrical installations of buildings	GERMANY, F.R.
65: Industrial-process measurement and control	FRANCE
65A: System consideration	UNITED KINGDOM
65B: Elements of systems	UNITED STATES
65C: Digital data communications for measurement and control systems	UNITED KINGDOM
66: Measuring equipment for electronic techniques	HUNGARY
66D: Analyzing equipment	UNITED STATES
66E: Safety of measuring, control and laboratory equipment	UNITED KINGDOM
68: Magnetic alloys and steels	GERMANY, F.R.
69: Electric road vehicles and electric industrial trucks	SWEDEN
70: Degrees of protection by enclosures	GERMANY, F.R.
71: Electrical installations for outdoor sites under heavy conditions (including open-cast mines and quarries)	AUSTRALIA
72: Automatic controls for household use	UNITED STATES
73: Short-circuit currents	NORWAY
74: Safety of data processing equipment and office machines	UNITED STATES
75: Classification of environmental conditions	SWEDEN
76: Laser equipment	UNITED STATES

IEC NO.	TECHNICAL COMMITTEES AND SUBCOMMITTEES TITLE	COUNTRY HOLDING SECRETARIAT
77:	Electromagnetic compatibility between electrical equipment including networks	GERMANY, F.R.
77A:	Equipment for connection to the public low-voltage supply system	FRANCE
77B:	Industrial and other non-public networks and equipment connected thereto	to be appointed
78:	Tools for live working	CANADA
79:	Alarm systems	BELGIUM
80:	Navigational instruments	UNITED KINGDOM
81:	Lightning protection	ITALY
82:	Solar photovoltaic energy systems	UNITED STATES
83:	Information technology equipment	—
84:	Equipment and systems in the field of audio, video and audiovisual engineering	NETHERLANDS
85:	Measuring equipment for basic electrical quantities	HUNGARY
86:	Fibre optics	UNITED STATES
86A:	Fibres and cables	UNITED KINGDOM
86B:	Fibre optic interconnecting devices and passive components	FRANCE
87:	Ultrasonics	USSR
88:	Windturbine generator system	NETHERLANDS
International Special Committee on Radio Interference (C.I.S.P.R.)		UNITED KINGDOM
Sub-Committee A of C.I.S.P.R.: Radio interference measurements and statistical methods		UNITED STATES
Sub-Committee B of C.I.S.P.R.: Interference from industrial, scientific and medical radio-frequency apparatus		JAPAN
Sub-Committee C of C.I.S.P.R.: Interference from overhead power lines, high-voltage equipment and electric traction systems		ITALY
Sub-Committee D of C.I.S.P.R.: Interference relating to motor vehicles and internal-combustion engines		GERMANY, F.R.
Sub-Committee E of C.I.S.P.R.: Interference characteristics of radio receivers		ITALY
Sub-Committee F of C.I.S.P.R.: Interference from motors, household appliances, lighting apparatus and the like		NETHERLANDS
Sub-Committee G of C.I.S.P.R.: Interference characteristics of information technology equipment		GERMANY, F.R.

APPENDIX D

Distribution by Country for Secretariats of IEC Technical Committees and Sub-Committees

	<u>Total Held</u>
France	35
United States	32
United Kingdom	26
Germany, F.R.	25
Italy	15
Netherlands	14
Sweden	10
USSR	9
Switzerland	5
Belgium	4
Canada	3
Hungary	3
Japan	3
South Africa	2
Czechoslovakia	2
Australia	1
Brazil	1
Denmark	1
India	1
Norway	1
New Zealand	1
Yugoslavia	1
(Vacant)	<u>2</u>
TOTAL	197

NOTE: EC countries hold a total of 120 secretariats.
Source: 1989 IEC Directory

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This report presents updated information on the current level of U.S. participation in the two major international standardization bodies; ISO and IEC. Data on the new ISO/IEC Joint Technical Committee 1 (JTC 1) on Information Technology are also presented.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

American National Standards Institute; European Community; international standards; participation; standardization; U.S. exports

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